
SynTherm® P

SynTherm® P is a flexible polyester film based on polyethylene terephthalate. With increasing thickness the film appears to be cloudy or milky white.

Attributes

With its excellent balance of electrical properties SynTherm® P offers many constructional possibilities for the electrical industry. It is suitable for use in a temperature range from -40 °C to +140 °C short-term.

Application

Polyester film SynTherm® P is suitable for systems up to 130 °C. It is used in motor and generator engineering as wedge and for slot insulation or phase insulation. In transformers, chokes and relays it is often used as core, layer or final insulation.

Delivery forms

Film thickness in µm:

23, 36, 50, 75, 100, 125, 190, 250, 300, 350

(further thicknesses on request)

SynTherm® P is available:

- tapes as of 6 mm width
- rolls up to 1,000 mm width

Feathering:

- depth approx. 1 - 12 mm, distance approx. 1 - 10 mm
- as of 10 mm up to 240 mm width of tape,

material thickness on request

Base

PET

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Updated 07/21



| Mechanical | Unit of measure | | | | | | |
|---|-------------------|------|------|-----|-----|-----|-----|
| Total thickness | µm | 23 | 36 | 50 | 75 | 100 | 125 |
| Specific weight | g/m ² | 32.2 | 50.4 | 70 | 105 | 140 | 175 |
| Tensile strength longitudinal | N/mm ² | 196 | 196 | 186 | 186 | 176 | 176 |
| Tensile strength transversal | N/mm ² | 196 | 196 | 186 | 186 | 176 | 176 |
| Elongation at break longitudinal | % | 130 | 130 | 140 | 140 | 140 | 140 |
| Elongation at break transversal | % | 120 | 120 | 130 | 130 | 130 | 130 |
| Shrinkage (30 min at 150 °C) longitudinal | % | 1.8 | 1.6 | 1.6 | 1.4 | 1.2 | 1.2 |
| Shrinkage (30 min at 150 °C) transversal | % | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |

| Mechanical | Unit of measure | | | | |
|-------------------------------|-------------------|-----|-----|-----|-----|
| Total thickness | µm | 190 | 250 | 300 | 350 |
| Specific weight | g/m ² | 266 | 350 | 420 | 490 |
| Tensile strength longitudinal | N/mm ² | 176 | 176 | 166 | 166 |

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| Mechanical | Unit of measure | | | | |
|---|-------------------|-----|-----|-----|-----|
| Tensile strength transversal | N/mm ² | 176 | 176 | 166 | 166 |
| Elongation at break longitudinal | % | 150 | 150 | 150 | 150 |
| Elongation at break transversal | % | 140 | 140 | 140 | 140 |
| Shrinkage (30 min at 150 °C) longitudinal | % | 1.2 | 1.2 | 1.2 | 1.2 |
| Shrinkage (30 min at 150 °C) transversal | % | 0.4 | 0.4 | 0.4 | 0.4 |

| Electrical | Unit of measure | | | | | | |
|---------------------|-----------------|-----|-----|-----|------|-----|-----|
| Total thickness | µm | 23 | 36 | 50 | 75 | 100 | 125 |
| Dielectric strength | kV | 4.5 | 7.5 | 9.5 | 12.5 | 14 | 17 |

| Electrical | Unit of measure | | | | |
|---------------------|-----------------|-----|-----|-----|-----|
| Total thickness | µm | 190 | 250 | 300 | 350 |
| Dielectric strength | kV | 20 | 22 | 24 | 26 |

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